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EXAMINER	
NOLAN, DANIEL A	
ART UNIT	**PAPER NUMBER**
2654	

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/740,790	YAMAJI, HIROTAKA
	Examiner	Art Unit
	Daniel A. Nolan	2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 June 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 6 8 9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,6,8 and 9* is/are rejected.

7)☐ Claim(s) _ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 December 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *040929* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

2. The filing of 25 June 2004 was entered to the following effect:

- The title was changed as indicated and the objection is withdrawn as satisfied.
- The claims were cancelled and the objection and rejections withdrawn as moot.
- The changes to the claims were applied as indicated.
- Claims 8 and 9 were added and the claims were examined on the merits.

Response to Arguments

3. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claims 1 and 9 are objected to because of the following informalities:

- In claim 1, "which includes" should be removed (line 24).
- Claim 1 contains the adjective "*appropriate*" (line 52). A more precise definition is needed.

- With regard to claim 1, indenting the wording to reflect the structure will prevent errors of misunderstanding in the future. See 37 CFR 1.77(b) which reads in part:

(i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet (37 CFR 1.52(b)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

The Examiner is proceeding with the understanding that lines 48-51 should be read:

... a controller which controls

the audio input processing section,

the playback/recording processing section,

the audio output section,

the external recording circuit section,

the general-purpose interface circuit section,

the protection processing section,

the ROM,

the RAM, and

the expanded RAM,

- In claim 9, "playbacked" (lines 7 & 31) should either be two words - - played back - - or should be enclosed in quotes.
- In claim 9, "playbacks" (lines 13, 17, 39) should either be two words - - plays back - - or should be enclosed in quotes.

Appropriate correction is required.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of claim 1 (line 52-55) as follows is required to align the features with the specification:

... and both selects [appropriate] processing files to process the digital audio data

from among files stored in the ROM then [and] stores the selected files in the RAM, all of which is to be done before the playback/recording processing section performs compression, expansion, encryption, and decryption of the digital audio data.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- In claim 1, the features ascribed to the controller (being over the audio input processing section, etc. – see lines 48-51) are not described in the specification other than by the diagram of figure 1, which is not sufficient in that it provides no indication that there exists enabling communication from *Controller* item *16* → to item *11:Audio Input*.
- In claim 9, the limitation that includes *a decryption key so as to encrypt data* (line 46) is not enabled by the specification, which limits the utility of a *decryption key* to *decrypting* (see lines 62-63 of this claim).

Claim Rejections - 35 USC § 103

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Ozawa *et al*, Milsted *et al*, Haber *et al*, Rao *et al*, Dean *et al* & Oshima

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa *et al* (Japan Patent 09-265731) in view of Milsted *et al* (U.S. Patent 6,263,313 B1) and further in view of Haber *et al* (U.S. Patent 5,774,856 A) and further in view of Rao *et al* (U.S. Patent 6,253,293 B1) and further in view of Dean *et al* (U.S. Patent 5,303,326 A) and further in view of Oshima (U.S. Patent 6,243,330 B1).

10. Regarding claim 1 as understood by the Examiner, the invention of Ozawa *et al* for *speech reproducing, recording and data transfer* read on the features of the claim for *audio playback recording apparatus* as follows:

- Ozawa *et al* read on the feature of *an audio input processing section, which receives analog audio data* (¶[0048] line 1) *data from an input apparatus connected thereto* (16 in drawing 1 – see ¶[0025] 4th line & ¶[0048] 2nd line) *and converts analog audio*

data to digital audio data (¶[0048] 4th line) *and outputs* the *digital audio data therefrom* (¶[0038] last 3 lines);

- Ozawa *et al* read on the feature of *a playback/recording processing section* (¶[0038] next-to-last line & ¶[0055]) *which compresses* the *digital audio data output from* the *audio input processing section* (¶[0043] line 3) *and stores* the *compressed digital audio data* (¶[0023] last line) *in a RAM* (RAM44 in figure 7), *and further decompresses* the *compressed digital audio data stored in* the *RAM* (in the *extension circuit* of ¶[0043 3rd line, it being an inherent property of expansion that it be done in random-access memory because disk space cannot be allocated until the ultimate size that will be required to hold the final product is known);
- Ozawa *et al* read on the feature of *an audio output processing section, which converts digital audio data output from* the *audio input processing section* (¶[0013] lines 4-5) *or digital audio data expanded by* the *playback/recording processing section to analog audio data* (¶[0013] lines 6-7), *and outputs* the *analog audio data to an output apparatus which is connected to* the *audio output processing section* (17 in drawing 5);
- Ozawa *et al* read on the feature of *an external recording circuit section* (¶[0017] lines 1-5, with the *auxiliary function* described in the last 4 lines), *which records compressed digital audio data stored in* the *RAM into an external recording medium* (with the *recorder* ¶[0046] lines 3-6), *and reads out compressed digital audio data from* the *external recording medium* (¶[0055] lines 8-9), *and stores* the *readout data into* the *RAM* (¶[0016] lines 1-3).

- Ozawa *et al* (¶[0046] line 3) read on *a general-purpose interface section* that *transfers digital audio data* but does not speak to *authorization.* The invention of Milsted *et al* *to create encoded digital content* with encrypting for protection read on the feature of *a general-purpose interface section* that *transfers digital audio data and authorization data to an external apparatus* (180→109 in figure 9 – see column 88 lines 29-31) *and receives digital audio data and authorization data thereof from an external apparatus* (when authorization is *uploaded* in column 88 line 39);

Milsted *et al* further read on the features of *a protection processing section which performs protection processing of* the *digital audio data* (column 10 lines 10-15), the *protection processing section having an encryption section which encrypts* the *digital audio data* (column 18 lines 1-35), *a decryption section which decrypts encrypted digital audio data* (column 21 line 52 – see column 18 lines 41-67), *an authorization data generation section which generates authorization data including an individual identifier* (the *digital signature* described in column 18 line 40) *and a decryption key* (*Symmetric Key* described in column 21 lines 38-43) *that are sent to* the *external apparatus connected to* the *general-purpose interface section* (column 10 lines 1-10, when *transmitted*). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Milsted *et al* to the device/method of Ozawa *et al* to make communications privileged.

While Ozawa *et al* discloses the well-known feature of ROM memory to hold data and programs (43 in drawing 7) and both Ozawa *et al* and Milsted *et al* teach the

necessity of *an authorization data verification section* (as examples 185, 151 in figure 1C and 192 in 1D, etc.), neither specify a *list*. The invention of Haber *et al* for *user-customized, low bit-rate speech vocoding* having list of authorized users reads on the feature *which compares* the *individual identifier included in* the *authorization data from the external apparatus connected to* the *general-purpose interface section with an individual identifier list stored in a ROM and checks properness of a transmitting party* (column 7 line 11); It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Haber *et al* to the device/method of Ozawa *et al* & Milsted *et al* to restrict access.

Neither Ozawa *et al* nor Milsted *et al* nor Haber *et al* address the place of *firmware* in the configuration. The invention of Rao *et al* for *processing audio information in a multiple processor audio decoder* read on the feature of *a ROM into which software used in processing in* the *playback/recording processing section and* the *protection processing section are stored as firmware* (column 9 lines 41-50), *and* the *individual identifier and* the *decryption key used by* the *protection processing section are stored* (with the *identifier* of Milsted *et al* and Haber *et al* and the key of Milsted *et al* [ibid.] included with "other fixed function code in column 9 line 47); It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Rao *et al* to the device/method of Ozawa *et al* Milsted *et al* and/or Haber *et al* to restrict the means of granting access.

Ozawa *et al* teaches the feature of *a RAM which stores the compressed digital audio data output from* the *compressed digital audio data or read out from* the *external recording circuit section or input to* the *general-purpose interface circuit section* (4th line ¶[0043] as *memorizing voice in RAM44), and software read out from* the *ROM* (also 4th line ¶[0043] with *established in it* – see 43→42 in drawing 7);

Neither Ozawa *et al* nor Milsted *et al* nor Haber *et al* nor Rao *et al* mention an *expanded RAM.* The invention of Dean *et al* for a *broadcast digital sound processing system* read on the feature of *an expanded RAM* (21 in figure 3) *into which digital audio data are stored in a case in which it is not possible to store digital audio data in* the *RAM* (column 12 lines 3-5, according to protocols for use provided for by Expanded Memory Specifications (EMS) 3.2 and 4.0. – see column 6 line 20); It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Dean *et al* to the device/method of Ozawa *et al* or Milsted *et al* or Haber *et al* or Rao *et al* to prevent play hesitation due to resources.

Where Ozawa *et al* read on the feature of a controller controlling the general-purpose interface circuit section (¶[0044 lines 4-5]) which performs all controls (the *whole control* of ¶[0043 line 3) he does not iterate every device as required, for example, that Dean *et al* read on the feature of a controller (22 in figure 3) which controls the audio input processing section (4 in figure 3), *the RAM, and the expanded RAM* (35 in figure 3), *the audio output section* (4 in figure 3) and *the general-purpose interface circuit section* (30 in figure 3) so neither they nor Milsted *et al* nor Haber *et al*

nor Rao *et al* singly encompass the controller being connected to all the devices in the application. The invention of Oshima *related to encryption resultant information* does read on the features of *a controller* (10 in figure 1) *which controls the audio input processing section* (12 in figure 1), *the playback/recording processing section* (9 in figure 1), *the audio output section* (7 in figure 1), *the external recording circuit section* (in FIG. 257, a communication interface 578 serves for communication with an external device), *the protection processing section* (the disk check program in FIG. 249 is advantageous in the copy protection), *and selects appropriate processing files to process* the *digital audio data from among files stored in the ROM, and stores* the *selected files in the RAM* (column 65 lines 55-58), *before* the *playback/recording processing section performs compression, expansion, encryption, and decryption of the digital audio data.* It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Oshima to the device/method of Ozawa *et al* or Milsted *et al* or Haber *et al* or Rao *et al* or Dean *et al* because a consolidated device is more portable than a collection of individual components.

Ozawa *et al*, Milsted *et al*, Haber, Rao *et al*, Dean *et al*, Oshima & Van Wie *et al*

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa *et al* in view of Milsted *et al* and further in view of Haber *et al* and further in view of Rao *et al* and further in view of Dean *et al* and further in view of Oshima and further in view of Van Wie *et al* (U.S. Patent 6,240,185).

12. Regarding claim 6, the claim is set forth with the same limits as claim 1. While Ozawa *et al* discloses *headers* (¶[0035]) holding administration data, neither they nor Milsted *et al* nor Haber *et al* nor Rao *et al* nor Dean *et al* nor Oshima specifically mention that such information would include *authorization.*

Van Wie *et al* (column 17 lines 18-19) read on the feature that the *authorization data writing section writes authorization data within a header information section of digital audio data* which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Van Wie *et al* to the device/method of Ozawa *et al* or Milsted *et al* or Haber *et al* or Rao *et al* or Dean *et al* or Oshima to prevent non-acoustic authorization and other protocols from interfering with the payload signal content.

Ozawa *et al*, Milsted *et al*, Haber *et al*, Rao *et al*, Dean *et al*, Oshima & Peifer *et al*

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa *et al* in view of Milsted *et al* and further in view of Haber *et al* and further in view of Rao *et al* and further in view of Dean *et al* and further in view of Oshima and further in view of Van Wie *et al* (U.S. Patent 6,240,185).

14. Regarding claim 8, the claim is set forth with the same limits as claim 1. While Ozawa *et al* discloses *home network*, neither they nor Milsted *et al* nor Haber *et al* nor Rao *et al* nor Dean *et al* nor Oshima specifically mention selection from those

claimed. The invention of Peifer *et al* for a *telemedicine system using voice video and data encapsulation and de-encapsulation for communicating medical information between central monitoring stations and remote patient monitoring stations* read on the feature where the *interfaces of* the *general-purpose interface circuit section are selected from the group consisting of USB, IEEE 1394, wireless LAN, and Home RF.* It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Peifer *et al* to the device/method of Ozawa *et al* or Milsted *et al* or Haber *et al* or Rao *et al* or Dean *et al* or Oshima so that intended use in a site using existing protocols does not require the complications and cost of adding another.

Allowable Subject Matter

15. Claim 9 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action.

16. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

17. The following is a statement of reasons for the indication of allowable subject matter:

- The present invention is directed to *combined audio playback/recording with playing automatically followed by concurrent compression, decompression and certification.*
- Claim 9 identifies the uniquely distinct features that "... [when] *input to the audio playback/recording apparatus are "playbacked" and recorded on an external recording medium, the audio output processing section converts the received digital audio data to analog audio data and "playbacks" the converted analog audio data,*

  the playback/recording processing section compresses the digital audio data and stores the compressed digital audio data in the RAM, and

  after the audio output processing section "playbacks" the digital audio data,

  the external recording circuit section records compressed digital audio data stored in the RAM into an external recording medium"
- The closest prior art, Oshima, discloses the process of receiving, processing and either playing or recording audio (see figures 1, 125 & 126-127) but fails to anticipate or render the above underlined limitations obvious that establish the qualifying condition that the recorded audio is both played and subsequently (re)recorded.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Oshima'578 (U.S. Patent Publication 2001/0038578 A1) related to encryption resultant information.
- Downs *et al* (U.S. Patent 6,226,618 B1) *electronic content delivery system* with encrypting for protection.
- Kaloi *et al* (U.S. Patent 5,511,000 A) solid-state recording system for audio, video or internal information - has solid-state record-playback unit with memory and controller performing signal conversion with bus transferring information to digital transfer unit.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A. Nolan whose telephone number is (703)305-1368. The examiner can normally be reached on Mon, Tue, Thu & Fri, from 7 AM to 5 PM. If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached at (703)305-9645.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866)217-9197 (toll-free).

The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306. The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE".

Formal response to this action may be faxed according to the above instructions, or mailed to:

P.O. Box 1450
Alexandria, VA 22313-1450

or hand-deliver to:

Crystal Park 2,
2121 Crystal Drive, Arlington, VA,
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan
Examiner
Art Unit 2654

DAN/d
October 2, 2004

RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER